

REMARKS

Applicants appreciate the Examiner's thorough consideration provided the present application. Claims 1-18 are now present in the application. Claims 1, 3, 10 and 16-18 have been amended. Claims 1, 3, 5, 10 and 16-18 are independent. Reconsideration of this application, as amended, is respectfully requested.

Allowable Subject Matter

The Examiner has indicated that claims 5, 7, 10, 13 and 16-18 would be allowable if rewritten to include all of the limitations of the base claim and any intervening claims. However, since claims 5 and 10 are independent claims, after a telephone interview with the Examiner on November 3, 2006, the Examiner agreed that claims 5 and 10 are allowed.

By the present amendment, claims 16-18 have been rewritten in independent form to include the subject matter of their base claims 1 and 3, respectively. Further, allowable claims 10 and 16 were modified to further clarify the invention. Accordingly, independent claims 5, 10, and 16-18 are in condition for allowance.

Claim Rejections Under 35 U.S.C. § 103

Claims 1-4, 6, 8, 9, 11, 12, 14 and 15 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Iijima et al., U.S. Patent No. 6,340,841 (hereinafter "Iijima"), in view of Kawakami et al., U.S. Patent No. 5,268,194 (hereinafter "Kawakami"). This rejection is respectfully traversed.

A complete discussion of the Examiner's rejection is set forth in the Office Action, and is not being repeated here.

In light of the foregoing amendments to the claims, Applicants respectfully submit that this rejection has been obviated and/or rendered moot. Without conceding to the propriety of the Examiner's rejection, but merely to timely advance the prosecution of the application, as the Examiner will note, independent claims 1 and 3 have been amended.

Independent claim 1 has been amended to recite "filling a solder resist or resin in a space between two adjacent circuit patterns by moving a squeegee to directly contact an upper surface of at least one of the two adjacent circuit patterns."

Independent claim 3 has been amended to recite "filling a solder resist or resin in at least one of the via holes by moving a squeegee to directly contact an upper surface of at least one of the first circuit patterns corresponding to the at least one of the via holes."

Support for the above combinations of steps can be found in FIGs. 4-7 as originally filed. Applicants respectfully submit that the combinations of steps set forth in amended independent claims 1 and 3 are not disclosed or suggested by the references relied on by the Examiner.

Claim 1

Iijima discloses wiring patterns 42/54/32/33, a solder resist 52 filled onto the wiring patterns 54 and the space between two adjacent wiring patterns 54, through holes 34, and a resin 36 filled into the through holes 34 (see FIG. 2). However, Iijima nowhere discloses how the solder resist 52 is filled onto the space between two adjacent wiring patterns 54. Therefore, Iijima fails to teach "filling a solder resist or resin in a *space between two adjacent circuit patterns by moving a squeegee to directly contact an upper surface* of at least one of the two

adjacent circuit patterns” as recited in amended claim 1. In particular, as shown in FIG. 2 of Iijima, the solder resist 52 covers the entire wiring patterns 54 and the space between two adjacent wiring patterns 54, and is *above the top of wiring patterns 54*. Therefore, it is impossible for Iijima to move a squeegee to *directly contact an upper surface* of at least one of the two adjacent wiring patterns 54 because the solder resist 52 would not be formed above the top of wiring patterns 54 as shown in FIG. 2

Kawakami discloses land patterns 3, and using a squeegee 9 to fill the conductive material 8 onto the land patterns 3 and into the through holes 5 (see FIG. 1). As shown in FIG. 1 of Kawakami, the squeegee 9 is on the upper surface of the mask 13, but is spaced apart from the upper surface of the land patterns 3. Therefore, Kawakami also fails to teach “filling a solder resist or resin in a space between two adjacent circuit patterns by moving a squeegee to *directly contact an upper surface of at least one of the two adjacent circuit patterns*” as recited in amended claim 1.

Claim 3

As mentioned, although Iijima discloses that the resin 36 is filled into the through holes 34 (see FIG. 2), Iijima nowhere discloses how the resin 36 is filled. Therefore, Iijima fails to teach “filling a solder resist or resin in at least one of the via holes by moving a squeegee to *directly contact an upper surface of at least one of the first circuit patterns corresponding to the at least one of the via holes*” as recited in amended claim 3.

Kawakami also fails to cure the deficiencies. In particular, as mentioned, Kawakami’s squeegee 9 is *spaced apart from* the upper surface of the land patterns 3 corresponding to the through holes 5. Therefore, Kawakami also fails to teach “filling a solder resist or resin in at

least one of the via holes by moving a squeegee to *directly contact* an upper surface of at least one of the first circuit patterns corresponding to the at least one of the via holes” as recited in amended claim 3.

Accordingly, neither of the utilized references individually or in combination teaches or suggests the above-noted features of amended independent claims 1 and 3. Therefore, Applicants respectfully submit that amended independent claims 1 and 3 and their dependent claims (at least due to their dependency) clearly define over the teachings of the utilized references.

Additional Cited References

Since the remaining patents cited by the Examiner have not been utilized to reject the claims, but rather to merely show the state of the art, no further comments are necessary with respect thereto.

CONCLUSION

All the stated grounds of rejection have been properly traversed and/or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently pending rejections and that they be withdrawn.

It is believed that a full and complete response has been made to the Office Action, and that as such, the Examiner is respectfully requested to send the application to Issue.

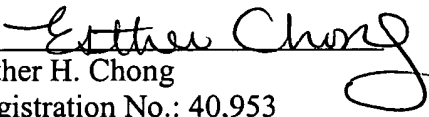
In the event there are any matters remaining in this application, the Examiner is invited to contact the undersigned at (703) 205-8000 in the Washington, D.C. area.

Pursuant to the provisions of 37 C.F.R. §§ 1.17 and 1.136(a), the Applicants hereby petition for an extension of one (1) month to November 30, 2006 in which to file a reply to the Office Action. The required fee is enclosed herewith.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§1.16 or 1.17; particularly, extension of time fees.

Dated: November 30, 2006

Respectfully submitted,

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